UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

FEB 29 2012

Captain Lowell D. Crow, Commanding Officer
Naval Weapons Station
Yorktown, Virginia

Re: Vapor Intrusion Investigation
Barracks Road Industrial Area
Naval Weapons Station Yorktown
Yorktown, Virginia

Dear Captain Crow:

On February 8, 2012, the United States Environmental Protection Agency Region III (USEPA) received preliminary results of the vapor intrusion investigation conducted at structures within the Barracks Road Industrial Area at the Naval Weapons Station, Yorktown, Virginia. Indoor air and sub-slab samples were collected at Sheds #3, #4, #5, #6, and at Buildings #371, #1803 and #1804. A review of the results indicates that vapor intrusion is occurring at some of these structures.

In Shed #3, the detected indoor air concentrations for trichloroethylene (TCE) ranged from 46 microgram per cubic meter (ug/m3) to 170 ug/m3, and the sub-slab concentrations ranged from 450 ug/m3 to 7,000,000 ug/m3. These concentrations are 5 to 19 times greater than the USEPA's Non-Cancer Risk-Based Screening Level (RSL) of 8.8 ug/m3 at Hazard Quotient (HQ) of 1.

USEPA Guidance recommends that Removal Action Levels (RALs) for non-carcinogenic endpoints be set at a Hazard Quotient (HQ) of up to 3 for long-term exposure to individual chemicals at a site. For TCE in indoor air, the concentration equivalent to an HQ of 3 under an occupational exposure scenario is 26.4 ug/m3. This trigger for action is far less than 170 ug/m3 maximum of TCE detected at Shed #3.

In accordance with Section 18.3 of the Federal Facility Agreement for the Naval Weapons Station Yorktown, USEPA proposes that the Navy immediately undertake a removal action at Shed #3 to mitigate the risks to workers.

The Navy should also consider mitigation at Shed #6 and Building 371. High levels of TCE were detected in indoor air and sub-slab samples at these buildings too, indicating that vapor intrusion is likely occurring.

Sincerely,

Ronald J. Borsellino, Director
Hazardous Cleanup Division

cc: Karen Sismour, VADEQ
Lora Werner, ATSDR Region III